 <b>University of British Columbia Centre for Dairy Education and Research</b>	<b>Document Number</b>	<b>SOP-Cow-018</b>
	<b>Revision Number</b>	<b>000</b>
	<b>Effective Date</b>	<b>October 26, 2020</b>
<b>DISPLACED ABOMASUM</b>		

## 1. PURPOSE

- 1.1. This Standard Operating Procedure (SOP) instructs farm workers and students at the UBC Dairy and Education Centre how to identify an animal suffering from a displaced abomasum.

## 2. SCOPE


- 2.1. This SOP will describe how to recognize when an animal may have a displaced abomasum and the different treatment options for a left or right displacement. It will also outline why it is important for the animal's welfare to take prompt corrective action.

## 3. RESPONSIBILITY

- 3.1. The Operations Manager is responsible for reviewing and updating this procedure as required
- 3.2. The Operations Manager is responsible for ensuring staff are trained in recognizing the signs of a displaced abomasum. This is an emergency situation that requires so prompt recognition of the problem and action.
- 3.3. Only the Operations Manager and Farm workers II will be responsible for diagnosing abomasal displacement and calling the veterinarian.
- 3.4. Treatment for a displaced abomasum is conducted by the herd veterinarian and assisted by a Farm Worker II.
- 3.5. Experienced farm workers will be responsible for administering any post-treatment or post-surgery care.
- 3.6. The Operations Manager is responsible for transferring any entries recorded in the dairy day book into Dairy Comp – the herd management software.

## 4. DEFINITIONS

- 4.1. The abomasum (or true stomach) normally lies on the floor of the abdomen, but can become filled with gas and rise to the top of the abdomen, when it is said to be 'displaced'. When displaced, it can block the normal flow of feed through the

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digestive tract. The abomasum is more likely to be displaced to the left (LDA) than the right (RDA).

- 4.2. Rolling: a method used to non-surgically move left displaced abomasums back into place. Involves vigorously rolling a recumbent cow from her back to her right side.
- 4.3. Toggling: securing the abomasum to the body wall with a blind tack (a holding stitch placed in the abomasum without opening the belly) or a toggle pin (a special device to fix the abomasum in place).

## 5. TRAINING

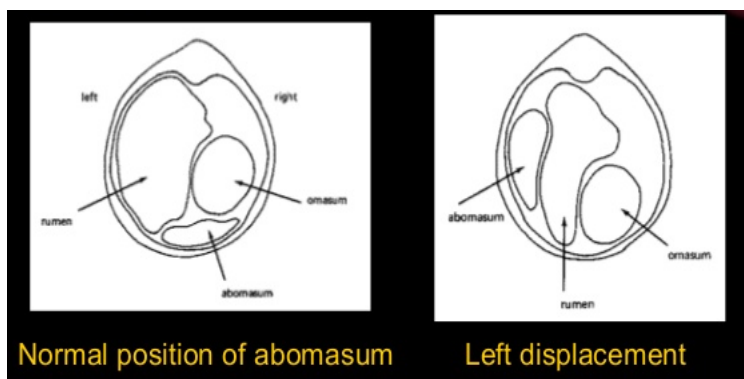
- 5.1. Training will include animal handling, how to recognize an abomasal displacement, giving injections, and drenching an animal.

## 6. SAFETY PRECAUTIONS

- 6.1. All personnel entering the cattle holding area will wear personal protective equipment -coveralls, disposable gloves and dedicated facility footwear.
- 6.2. Always wash your hands with soap and hot water when leaving the barn.

## 7. GENERAL – LEFT (LDA) OR RIGHT SIDE (RDA) ABOMASAL DISPLACEMENT

- 7.1. Left side abomasal displacement is the most commonly seen.





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- 7.2. Displaced abomasums are typically seen in a fresh animal < 1 month after calving.
- 7.3. Usually the animal has ketosis.
- 7.4. The animal is typically not chewing her cud.
- 7.5. Animal appears ‘dull’, and is tucked up in her belly. You may see a bulge in her left flank. With an RDA there could be a bulge in her right flank.
- 7.6. A characteristic “ping” over left/right rib cage. This can be heard by an experienced listener when there is a gas-filled organ such as the abomasum, up against the body wall.
- 7.7. Record any observations and treatments in the dairy day book.

### 8. PROCEDURE – FOR LDA OR RDA

- 8.1. Monitor all animals with ketosis for a displaced abomasum.
- 8.2. If an animal is suspected of having a displacement, move her to the hospital pen. See SOP on Moving and Chasing Cattle. Keep fresh feed and water readily available.
- 8.3. Immediately inform a Farm Worker II or the Operations Manager who will assess the animal and call the herd veterinarian.

**NB The veterinarian will confirm the diagnosis and decide on treatment for the displaced abomasum.**


### 9. LEFT DISPLACED ABOMASUM (LDA)

A LDA may sometimes be treated by rolling and toggling the cow. **This procedure is only done by a licensed veterinarian.**

### 10. MATERIALS FOR POST TREATMENT CARE OF A LDA

Some materials may be provided by the veterinarian.

- 10.1. Propylene Glycol (Glycol-P)-see SOP on Administering Oral Medications

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- 10.2. Drenching gun
- 10.3. Dextrose 50%-see SOP on Giving Injections
- 10.4. IV tubing and needle.
- 10.5. Drenchmate powder-see SOP on Administering Oral Medications
- 10.6. Drenchmate apparatus
- 10.7. Rompun (Xylazine) – tranquilizer provided at veterinarian’s discretion

**11. POST TREATMENT CARE FOR A LDA:**

DAY	DRUG NAME	DOSAGE	ROUTE	FREQUENCY
1	Dextrose, 50%	500 mls	IV	Once
	Drenchmate powder	1.5 lbs in 40L warm water	Orally	Once
	Glycol-P	300cc	Orally	1x/day
2	Glycol-P	300cc	Orally	1x/day
3	Glycol-P	300cc	Orally	1x/day
4	Glycol-P	300cc	Orally	1x/day

**Withdrawal Times for Rompun: Milk: 24 hours ; Meat: 3 days**

11.1 Record treatments in the dairy day book, and follow any special instructions from the veterinarian for cow care. Entries to be transferred to the herd management software by the Operations Manager.

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**12. RIGHT OR LEFT SIDE DISPLACED ABOMASUM (RDA, LDA) REQUIRING OPEN SURGERY**

Open surgery procedure for DA is only done by a licensed veterinarian.


**13. MATERIALS REQUIRED FOR POST SURGERY CARE OF A LDA OR RDA**

Some materials may be provided at the discretion of the veterinarian, depending upon the severity of the individual case:

- 13.1. Penicillin G – an antibiotic
- 13.2. Propylene glycol (Glycol-P)
- 13.3. Drenching gun-300ml capacity
- 13.4. Dextrose 50%
- 13.5. IV tubing & needle.
- 13.6. Drenchmate powder
- 13.7. Drenchmate apparatus
- 13.8. Flunixin Meglumine-anti-inflammatory, pain killer
- 13.9. Rompun (Xylazine) –tranquilizer-if required, is provided by veterinarian
- 13.10. Syringes and needles for IV, IM & SQ injections

**14. POST SURGERY CARE**


<b>DAY</b>	<b>DRUG NAME</b>	<b>DOSAGE</b>	<b>ROUTE</b>	<b>FREQUENCY</b>
1	Penicillin G	25cc	IM	2x/d for 5 d
1	Metacam	20cc	SQ	1x (may require 2 <sup>nd</sup> injection)
1	Dextrose, 50%	500 mls	IV	Once
1	Drenchmate powder	1.5 lbs in 40L warm water	Orally	Once
1	Glycol-P	300cc	Orally	1x/day
2	Glycol-P	300cc	Orally	1x/day

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3	Glycol-P	300cc	Orally	1x/day
4	Glycol-P	300cc	Orally	1x/day

**Withdrawal Times after last treatment of Penicillin: Milk: 96 hours; Meat: 14 days**

**14.1** Record observations and treatments in the day book, and follow any special instructions from the veterinarian for the animal's care. Entries to be transferred to the herd management software by the Operations Manager.

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## 15. REFERENCES

- 15.1. American College of Veterinary Surgeons. Adbomasal Displacement and Abomasal Volvulus in Cows. Web article. <https://www.acvs.org/large-animal/abomasal-displacement>. Accessed November 2019
- 15.2. CCAC Guidelines on the Care and Use of Farm Animals in Research, Teaching and Testing. CCAC. 2009
- 15.3. Code of Practice for the Care and Use of Dairy Cattle. National Farm Animal Care Council. 2009.

## 16. REFERENCED SOPS

- 16.1. SOP-Cow-006 Moving and Chasing Cattle
- 16.2. SOP-Cow-012 Giving Injections: Subcutaneous, Intramuscular and Intravenous.
- 16.3. SOP-Cow-014 Administering Oral Medications
- 16.4. SOP-Cow-020 Ketosis

## 17. APPROVAL AND REVISION HISTORY

<b>Author/Approver</b>		<b>Date</b>	<b>Signature</b>
<b>History</b>			
<b>Document #</b>	<b>Revision #</b>	<b>Changes</b>	